

experience of the writer in finding an exotic tree naturalized in a spot where it could by no ordinary possibility have been expected. On June 19, 1919, while collecting in the Calapooia Mountains along Smith River, near the northern boundary of Douglas County, Oregon, in a very remote and thinly-settled district about twenty miles to the west of the Southern Pacific Railroad, a tree was observed in a dense thicket of alders and Douglas firs near the roadside that attracted instant attention. No dwelling or other evidence of civilization was anywhere in sight, and the "forest primeval" had apparently never been disturbed. The tree stood about 40 feet in height, and was some six inches in diameter above the base. At the time it was in full flower, and was plainly a linden—a group not represented in the indigenous flora of Oregon, although occasionally found among the shade-trees in the larger towns. Closer examination of the flowers showed that it was typical *Tilia europaea* L.—a tree as little to be expected in the mountain-forest as a fan-palm. The mystery was complete; but it was somewhat dispelled when, on arriving at the little post-office of Gunter, a few hundred yards further on, the stalwart mountaineer who acted as postmaster informed us that some thirty years before an Englishman had taken up a homestead near the spot and engaged in bee-culture—a venture that ended in speedy failure; and the linden was probably a relic of his undertaking, this tree being a favorite with English apiarists. The forest had speedily resumed its sway, and no trace even of a clearing remained; but the linden had grown to a vigorous maturity, and will doubtless live to puzzle the next collector who may penetrate to this remote and little-known district.

JAMES C. NELSON.

BOOK REVIEWS

East's and Jones's *Inbreeding and Outbreeding**

"A man should be very careful in the selection of his parents," once said the poet Heine, half bitterly, half jestingly. But

* East, E. M. and Jones, D. E. *Inbreeding and Outbreeding; Their genetic and sociological significance.* Pp. 285. Illustrated. J. B. Lippincott Co. Philadelphia. 1919. Price, \$2.50.

even though one's heredity has been well looked after by preceding generations, one's environment also needs careful consideration if one desires to make the most of life. So the far-seeing human being must consider the laws underlying inheritance as applied to his food crops, his meat animals, his pleasure plants and his pleasure animals, for after all, these make up much of his environment.

And it is certain phases of these problems of heredity in plants and animals, including man, which Professors East and Jones have set forth in very interesting, simple, clear and trustworthy fashion in their "Inbreeding and Outbreeding." "Historically," say the authors, "these are old, old problems, practical problems of considerable significance bound up with man's gravest affairs, his marriage customs and his means of subsistence." The value of inbreeding and outbreeding in the establishment and creation of new breeds of domestic animals is still a much discussed question among breeders of live stock. How to produce the largest yields of certain staple grains, such as corn, from an acre of land, is one of the pressing problems of the present and of the near future, since it has a direct bearing on questions involving labor, food supply and increase in population. That more fruit is obtained per unit area from tomato plants grown from certain kinds of outcrossed seed is probably unknown to most truckers, seedsmen, canning-factory managers and home gardeners. Over laws regulating the marriage of first cousins and other near relatives, our lawmakers still dispute. And of the effects, good and bad, of immigration, the "melting pot" and the intermingling of races through marriage, even the intelligent public is still largely uninformed from a biological standpoint. Much light is thrown on these fascinating and important questions as well as upon many others, such as heredity and disease, reproduction in animals and plants, the increased vigor of hybrids in many animals and plants over that of their parents, the mechanism of heredity, sterility, and the inheritance of genius in man. While this book is designed especially for those interested in general biology, the authors had also in mind the farmer and the live stock breeder, and *especially* the physician,

the clergyman, the social worker, the penologist and the statesman for "all we would ask is that 'these' give conscientious consideration to the facts of heredity as a guiding principle in the solution of the problems of the family with which they have to do. No questions are so hedged about with superstition, with irrational tradition, with religious dogma, as those which concern sex and reproduction; no problems are more delicate, more difficult, than those which seek the direction of human evolution; yet after all, man is an animal and must be dealt with as such. Civic law he may escape, to natural law there is no immunity."

ORLAND E. WHITE.

Recknagel's and Bentley's Forest Management*

There is at present an active movement, led by professional foresters with Lt. Col. Graves, Chief of the U. S. Forest Service, at their head, for the application of forestry to privately owned timberlands in the United States. These lands contain three quarters of the standing timber in the United States, and are for the most part being cut without regard to the future. Whether or not Recknagel's and Bentley's "Forest Management" was planned by the authors as a part of this movement, aside from the avowed purpose of stimulating forestry practice in general, we do not know. In any case the book fits in admirably and is most timely.

The authors do not claim originality for their work, admitting that most of their material is already contained in the technical literature already published in this country. Nor do they aim at popular treatment. Their purpose is to present the subject in such a way that it can be understood and applied by the owners of forest lands who are not professional foresters. This does not apply to the farmer and owner of a small woodlot for whom Ferguson has already written "Farm Forestry."† In France the bulk of the forests are held by private owners as in this country, but forestry is universally practiced. Most of the

* Recknagel, A.B., and Bentley, J., Jr., *Forest Management*, xiii + 269 pages, 26 figures, John Wiley and Sons, New York, 1919, net \$2.50.

† Ferguson, J. A., *Farm Forestry*, viii + 241 pages, illustrated, John Wiley and Sons, New York.